

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A DC-DC converter comprising:

a synchronous semiconductor device; and

a control semiconductor device;

wherein at least one of said semiconductor devices includes:

a semiconductor body of a first conductivity which includes a channel region of a second conductivity and a major surface;

an active region formed in said semiconductor body, said active region including a trench less than 0.5 microns wide extending through said channel region and a gate structure disposed in said trench which includes a gate oxide layer disposed at least on said sidewalls of said trench and a gate electrode disposed adjacent said gate oxide layer, conductive regions of said first conductivity adjacent said trench in said channel region; and a metallic contact in contact with said conductive regions; and

a termination structure, said termination structure including,

a termination trench having a slanted sidewall formed in said semiconductor body, and a grown field oxide layer formed in said termination trench below said major surface, a polysilicon field plate formed over said field oxide layer, and a low temperature oxide body over said polysilicon field plate, wherein said field oxide layer is thicker than said gate oxide layer, wherein said metallic contact extends over said low temperature oxide body, and wherein said semiconductor body of said first conductivity extends from said trench to the bottom of said termination trench.

Claims 2-3 (canceled).

4. (currently amended) A semiconductor device according to claim 1, wherein said trench include includes an oxide mass formed at its bottom said oxide mass being thicker than said gate oxide layer.

5. (currently amended) A semiconductor device according to claim 4, wherein said semiconductor body includes conductive regions of said first conductivity formed adjacent said trench in said channel region, and further comprising a semiconductor substrate of said first conductivity, said semiconductor body being formed over said semiconductor substrate, wherein said conductive regions are electrically connectable to said semiconductor substrate through invertible channels adjacent said trench.

6. (original) A semiconductor device according to claim 5, wherein said conductive regions are source regions.

7. (previously presented) A semiconductor device according to claim 1, wherein the depth of said trench has been selected to achieve an optimum figure of merit.

8. (previously presented) A semiconductor device according to claim 1, wherein said trench is a stripe.

9. (previously presented) A semiconductor device according to claim 1, wherein said trench is a cell.

10. (original) A semiconductor device according to claim 9, wherein said cell is hexagonal.